

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L14	0	(10/982283).APP.	USPAT; USOCR	AND	OFF	2011/08/28 12:43
L15	37	("6937472" "4648807" "6123145" "5270484" "4753318" "3029743" "5058702" "6588497" "4109108" "5758823" "4665549" "5692054" "5798465" "4923031" "5077601").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 12:51
L16	181264	("361").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/28 13:16
L17	849664	((("165") or ("257") or ("417") or ("239")).CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/28 13:16
L18	7712	361/692,694,695,699,700.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2011/08/28 13:16
L19	171	(L16 or L17 or L18) (sound or noise or acoustic\$4 adj2 (weak\$3 or cancel or cancellation or dampen\$3)) (frequenc\$3 or amplitud\$3 adj2 (control\$4)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:16
L20	2	19 (control\$3 adj2 (frequenc\$3)) (control\$3 adj2 (vibrat\$3))(eject\$3 or nozzle\$2)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:19
L21	102	19 (gas or fluid or coolant adj2 (eject\$3 or nozzle or pump\$3 or outlet or vibrat\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:21
L22	849664	((("165") or ("257") or ("417") or ("239")).CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/08/28 13:24
L23	118	L22 (piezoelectric\$3 or thermoelectric\$3 adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:24

L24	4	L23 (waves adj2 (weak\$3 or cancel or cancellation or dampen\$3)) (frequenc\$3 or amplitud\$3 adj2 (waves)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:24
L25	4	L23 (wave adj2 (weak\$3 or cancel or cancellation or dampen\$3)) (frequenc\$3 or amplitud\$3 adj2 (waves)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:28
L26	4	L23 (wave adj2 (weak\$3 or cancel or cancellation or dampen\$3)) (frequenc\$3 or amplitud\$3 adj2 (wave)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/08/28 13:28
L27	1	gas vibrator plurality ejector pulsating gas flow sound waves generated vibrations upper lower portion same wave reversed weaken phases first control unit frequency.clm.	US-PGPUB	AND	ON	2011/08/28 13:38
L28	3	("2009/0219686").URPN.	USPAT	AND	OFF	2011/08/28 13:39
S1	34	((HIROI CHI) near2 (ISHIKAWA)).INV.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 12:47
S2	13	((TOMOHARU) near2 (MUKASA)).INV.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 12:47
S3	4	("6123145" "6588497").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2010/01/05 12:48
S4	43	("4171852" "4180377" "4261689" "4406323" "4450505" "4495947" "4501319" "4941398" "5034688" "5087175" "5121290" "5395592" "5402312" "5742954" "5861703" "5894990" "5931643" "5953209" "5988522" "6059020" "6123145" "6315031" "6343014" "6356435" "6405794" "6457654").PN. OR ("6588497").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 14:31
S5	114	(smith adj2 (courtney))	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 14:33
S6	0	(11/911179).APP.	USPAT; USOCR	AND	OFF	2010/01/05 14:38
S7	10	("20050089415" "20050056030" "3373752" "4498851" "4648807" "4923000" "4350838" "5336062" "6123145" "6588497" "6123145" "6367470" "6588497").PN.	USPAT; USOCR	AND	OFF	2010/01/05 14:40

S8	43	("4171852" "4180377" "4261689" "4406323" "4450505" "4495947" "4501319" "4941398" "5034688" "5087175" "5121290" "5395592" "5402312" "5742954" "5861703" "5894990" "5931643" "5953209" "5988522" "6059020" "6123145" "6315031" "6343014" "6356435" "6405794" "6457654").PN. OR ("6588497").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 14:41
S9	0	("2006/0245163").URPN.	USPAT	AND	OFF	2010/01/05 14:43
S10	12	("20040223302" "5758823" "5798465" "6123145" "6353295" "6588497").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2010/01/05 14:44
S11	30	("4109108" "4648807" "4665549" "4753318" "4923031" "5058702" "5077601" "5270484" "5692054" "5758823" "5798465" "6123145" "6588497" "6937472").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2010/01/05 14:46
S12	231	glezer.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:02
S13	168489	("361").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/01/05 15:02
S14	5	S12 S13	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2010/01/05 15:02
S15	1	(11/599603).APP.	USPAT; USOCR	AND	OFF	2010/01/05 15:02
S16	1	(11/599628).APP.	USPAT; USOCR	AND	OFF	2010/01/05 15:03
S17	156	("20010037875" "20020056908" "20020080582" "20020098097" "20030043531" "20030066628" "20030075615" "20030110788" "20030133587" "20030177899" "20040125561" "20040231341" "20050013116" "20050031137" "20050074662" "20050105757" "20050111185" "20050121171" "20050163338" "20050284612" "20060016581" "20060022092" "20060145027" "20060164805" "3464672" "4031171" "4170244" "4238425" "4257224" "4350838" "4406323" "4498851" "4501319" "4533082" "4590399" "4590970" "4595338" "4664345" "4667877" "4693201" "4697116" "4697769"	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 15:03

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S18	24	("20010037875" "20020056908" "20020080582" "20020098097" "20030043531" "20030066628" "20030075615" "20030110788" "20030133587" "20030177899" "20040125561" "20040231341" "20050013116" "20050031137" "20050074662" "20050105757" "20050111185" "20050121171" "20050163338" "20050284612" "20060016581" "20060022092" "20060145027" "20060164805" "3464672" "4031171" "4170244" "4238425" "4257224" "4350838" "4406323" "4498851" "4501319" "4533082" "4590399" "4590970" "4595338" "4664345" "4667877" "4693201" "4697116" "4697769" "4708600" "4727930" "4763225" "4780062" "4802642" "4923000" "4930701" "4930705" "4932610" "4938279" "4938742" "4939405" "4941398" "4969802" "4976311"	US-PGPUB	AND	OFF	2010/01/05 15:05

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S19	11	("20050035684" "20060034051" "4399484" "4583056" "5563768" "5712762" "5724229" "6736192" "7170745" "7233493" "7262964"). PN. OR ("7450381").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/05 15:11
S20	788819	((("165") or ("257") or ("417") or ("239"))).CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/01/05 15:17
S21	99	S20 (piezoelectric\$3 or thermoelectric \$3 adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:21
S22	11	S21 (gas or fluid or air or airflow adj3 (vibrat\$3 or frequenc\$3 or amplitude)) (sound or noise) (control \$3 adj3 (frequenc\$3 or amplitude or vibration))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:27
S23	18	S21 (gas or fluid or air or airflow adj3 (vibrat\$3 or frequenc\$3 or amplitude)) (sound or noise) frequenc \$3 amplitude vibration	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:30

S24	9	S23 not S22	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:31
S25	24	S13 (piezoelectric\$3 or thermoelectric \$3 adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:31
S26	6	S25 (gas or fluid or air or airflow adj3 (vibrat\$3 or frequenc\$3 or amplitude)) (sound or noise) frequenc \$3 amplitude vibration	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:31
S27	75	"200909219686" or "5894985" or "5894980" or "5628411" or "6308740"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/05 15:36
S32	38	("20010001278" "20020175596" "20030015035" "20040217671" "20060006764" "3743446" "4011474" "4063826" "4170244" "4322449" "4498851" "4512933" "4595338" "4684328" "4697738" "4753579" "4780062" "4834619" "4923000" "5008582" "5256159" "5419780" "5520715" "5628411" "5697153" "5702618" "5705070" "5861703" "5982801" "6065688" "6164140" "6252769" "6308740" "6361747" "6467350" "6576042" "6638032" "6654392").PN. OR ("7282837").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/07 14:04
S33	45	("4498851" "4595338" "4751713" "4753579" "4780062" "4834619" "4923000" "5008582" "5151626" "5192197" "5381950" "5558156").PN. OR ("5861703"). URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2010/01/07 15:13
S34	0	(10/126867).APP.	US-PGPUB; USOCR	AND	OFF	2010/01/07 15:43
S35	245666	("73").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/01/07 17:42
S36	978	S35 (amplitude adj3 (range or height or mm or millimeter))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/07 17:43
S37	3	S35 (amplitude adj3 (1mm or 2mm or 3mm))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/07 17:44

S38	1	S36 (amplitude adj3 (1mm or 2mm or 3mm))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/07 17:44
S39	886	S35 (amplitude adj3 (range or height or millimeter))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/07 17:47
S40	168564	("361").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/01/07 17:48
S41	789155	((("165") or ("257") or ("417") or ("239")).CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/01/07 17:48
S42	4	S39 (S40 or S41)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/07 17:48
S43	6626	361/692,694,695,699,700.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2010/01/08 16:33
S44	7	S43 (piezoelectric\$3 or thermoelectric \$3 or electromagnetic adj3 (frequenc \$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:36
S45	1	S43 (piezoelectric\$3 or thermoelectric \$3 or electromagnetic or actuator adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4)) (actuat\$3 adj3 (vibrat\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:36
S46	12	S43 (piezoelectric\$3 or thermoelectric \$3 or electromagnetic or actuator adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:37
S47	0	S43 (diaphragm adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control \$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:37
S48	0	S43 (actuat\$3 adj3 (frequenc\$3 or amplitud\$3)) (vibrat\$3 adj3 (control \$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:38

S49	1	S43 (gas adj3 (eject\$3 or nozzle or pump\$3)) (frequenc\$3 or amplitud\$3) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:39
S50	7	S43 (air or cool\$3 or fluid adj3 (eject \$3 or nozzle or pump\$3)) (frequenc \$3 or amplitud\$3) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/01/08 16:40
S51	8	(US-6588497-\$ or US-5894990-\$ or US-5798465-\$ or US-7282837-\$ or US-6308740-\$ or US-5861703-\$ or US-4923000-\$ or US-4753579-\$).did.	USPAT	AND	OFF	2010/07/12 08:36
S52	23	(US-6588497-\$ or US-7606029-\$ or US-7252140-\$ or US-5894990-\$ or US-5121290-\$ or US-7450381-\$ or US-6123145-\$ or US-5798465-\$ or US-4648807-\$ or US-7420807-\$ or US-7282837-\$ or US-6308740-\$ or US-6252769-\$ or US-5982801-\$ or US-5861703-\$ or US-5008582-\$ or US-4923000-\$ or US-7638928-\$ or US-7607470-\$ or US-7321184-\$ or US-4780062-\$ or US-4753579-\$).did. or (WO-9926457-\$).did.	USPAT; DERWENT	AND	OFF	2010/07/12 08:36
S53	0	(S51 or S52) (frequenc\$3 adj2 (weak \$5 or cancel\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/07/12 08:37
S54	0	(S51 or S52) (frequenc\$3 adj2 (damp \$5))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/07/12 08:37
S55	0	(S51 or S52) (frequenc\$3) (db adj2 (sound or noise))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/07/12 10:49
S56	0	(S51 or S52) (frequenc\$3) (db near (sound or noise))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/07/12 10:50
S58	2	(S51 or S52) db	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/07/12 10:50
S59	8	(US-6588497-\$ or US-5894990-\$ or US-5798465-\$ or US-7282837-\$ or US-6308740-\$ or US-5861703-\$ or US-4923000-\$ or US-4753579-\$).did.	USPAT	AND	OFF	2010/11/16 15:06

S60	23	(US-6588497-\$ or US-7606029-\$ or US-7252140-\$ or US-5894990-\$ or US-5121290-\$ or US-7450381-\$ or US-6123145-\$ or US-5798465-\$ or US-4648807-\$ or US-7420807-\$ or US-7282837-\$ or US-6308740-\$ or US-6252769-\$ or US-5982801-\$ or US-5861703-\$ or US-5008582-\$ or US-4923000-\$ or US-7638928-\$ or US-7607470-\$ or US-7321184-\$ or US-4780062-\$ or US-4753579-\$).did. or (WO-9926457-\$).did.	USPAT; DERWENT	AND	OFF	2010/11/16 15:06
S61	20	(S59 or S60) (frequenc\$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/11/16 15:06
S62	23	(US-6588497-\$ or US-7606029-\$ or US-7252140-\$ or US-5894990-\$ or US-5121290-\$ or US-7450381-\$ or US-6123145-\$ or US-5798465-\$ or US-4648807-\$ or US-7420807-\$ or US-7282837-\$ or US-6308740-\$ or US-6252769-\$ or US-5982801-\$ or US-5861703-\$ or US-5008582-\$ or US-4923000-\$ or US-7638928-\$ or US-7607470-\$ or US-7321184-\$ or US-4780062-\$ or US-4753579-\$).did. or (WO-9926457-\$).did.	USPAT; DERWENT	AND	OFF	2010/11/17 09:58
S63	2	S62 (revers\$3 adj2 (phase\$2))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/11/17 09:58
S64	10	(vibrat\$3 adj2 (gas or fluid)) (revers\$3 adj2 (phase\$2)) (sound or noise adj3 (weaken\$3 or dampen\$3 or cancel\$5))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/11/17 10:45
S65	10	(vibrat\$3 adj2 (gas or fluid)) (revers\$3 adj2 (phase\$2)) (sound or noise adj3 (weaken\$3 or dampen\$3 or cancel\$5 or damp\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/11/17 10:49
S66	0	(10/982283).APP.	USPAT; USOCR	AND	OFF	2010/11/17 10:58
S67	35	("3029743" "4109108" "4648807" "4665549" "4753318" "4923031" "5058702" "5077601" "5270484" "5692054" "5758823" "5798465" "6123145" "6588497" "6937472").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2010/11/17 11:01

S68	1	(invert\$3 adj2 (amplitude)) frequency (chamber adj2 (vibrat\$3)) (gas or jet adj2 (eject\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:38
S69	196	(invert\$3 adj2 (amplitude)) frequency (gas or jet or cool\$3 adj2 (flow or vibrat\$3 or pulsat\$3 or frequenc\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:42
S70	70898	(invert\$3 or revers\$3 adj2 (amplitude or phase\$2)) frequency (gas or jet or cool\$3 adj2 (flow or vibrat\$3 or pulsat\$3 or frequenc\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:43
S71	15	S70 (control\$3 adj2 (frequenc\$3 or amplitude\$2)) (control\$3 adj2 (vibrat\$3))(eject\$3 or nozzle\$2)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:45
S72	196	S69 (invert\$3 or revers\$3 adj2 (amplitude or phase\$2)) frequency (gas or jet or cool\$3 adj2 (flow or vibrat\$3 or pulsat\$3 or frequenc\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:45
S73	1	S69 (control\$3 adj2 (frequenc\$3 or amplitude\$2)) (control\$3 adj2 (vibrat\$3))(eject\$3 or nozzle\$2)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 17:48
S74	3	("2009/0219686").URPN.	USPAT	AND	OFF	2011/04/25 17:49
S75	14	S72 (sound adj2 (wave\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/04/25 18:12
S76	0	gas ejector one vibrator plurality ejecting sections arranged eject pulsating gas flow sound waves generated vibrations upper lower portion same wave form reversed weaken phases first control unit frequency.clm.	US-PGPUB	AND	OFF	2011/05/08 10:44
S77	0	gas ejector one vibrator plurality ejecting sections arranged eject pulsating gas flow sound waves generated vibrations upper lower portion same wave form reversed weaken phases first control unit frequency	US-PGPUB	AND	OFF	2011/05/08 10:44
S78	0	gas one vibrator plurality sections arranged eject\$3 pulsating gas flow sound waves generated vibrations upper lower portion same wave form reversed weaken phases first control unit frequency	US-PGPUB	AND	OFF	2011/05/08 10:45

S79	0	gas ejector one vibrator plurality ejecting sections arranged eject pulsating gas flow sound waves generated vibrations upper lower portion same wave form reversed weaken phases first control unit frequency.clm.	US-PGPUB	AND	OFF	2011/05/08 10:46
S80	0	gas one vibrator plurality sections arranged eject\$3 pulsating gas flow sound waves generated vibrations upper lower portion same wave form reversed weaken phases first control unit frequency	US-PGPUB	AND	OFF	2011/05/08 10:46
S81	0	gas vibrator plurality eject\$3 pulsating gas flow sound waves generated vibrations upper lower portion same wave revers\$3 weaken phases first control frequenc\$3	US-PGPUB	AND	OFF	2011/05/08 10:47
S82	0	gas vibrator plurality eject\$3 pulsating gas flow sound waves generated vibrations upper lower portion same wave revers\$3 weaken phases first control frequenc\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2011/05/08 10:47
S83	1	gas vibrator plurality eject\$3 pulsating gas flow sound waves generated vibrations upper lower portion same wave revers\$3 weaken phases first control frequenc\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 10:47
S84	1	jp55101800	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 11:11
S85	0	jp55101800a	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 11:11
S86	0	wo55101800	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 11:12
S87	1	wo "55101800"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 11:12
S88	38	("4498851" "4595338").PN. OR ("5008582").URPN.	US-PGPUB; USPAT; USOCR	AND	OFF	2011/05/08 11:29

S89	178827	("361").CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/05/08 13:44
S90	838195	((("165") or ("257") or ("417") or ("239")).CLAS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/05/08 13:44
S91	182	(S89 or S90) (gas or fluid adj2 (eject \$3 or nozzle or pump\$3)) (frequenc \$3 or amplitud\$3 adj2 (control\$3)) (vibrat\$3 adj3 (control\$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:44
S92	181	S91 (frequenc\$3 or sound or waves or waveform adj2 (weak\$5 or cancel \$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:46
S93	32	S92 (invert\$3 or revers\$3 adj2 (amplitude or phase\$2)) frequency (gas or jet or cool\$3 adj2 (flow or vibrat\$3 or pulsat\$3 or frequenc\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:48
S94	115	S92 (invert\$3 or revers\$3 or opposite \$2 or mirror\$2 adj2 (amplitude or phase\$2)) frequency (gas or jet or cool\$3 adj2 (flow or vibrat\$3 or pulsat \$3 or frequenc\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:49
S95	32	S93 S94	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:49
S96	43	S94 (vibrator or diaphragm or actuat \$3 adj2 (eject\$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:51
S97	44	S94 (vibrator or diaphragm or actuat \$3 adj3 (phase\$2))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:52
S98	12	S95 S97	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:52
S99	7503	361/692,694,695,699,700.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	OFF	2011/05/08 13:58

S100	3	S91 S99	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 13:58
S101	61	(S89 or S90) (sound or noise adj2 (weak\$3 or cancel or cancellation)) (frequenc\$3 or amplitud\$3 adj2 (control\$4)) (vibrat\$3 adj3 (control \$4))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 14:00
S102	26	S101 (gas or fluid adj2 (eject\$3 or nozzle or pump\$3 or outlet or vibrat \$3))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 14:02
S103	35	S101 (gas or fluid or jet adj2 (eject\$3 or nozzle or pump\$3 or outlet or vibrat \$3 or jet))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2011/05/08 14:03

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